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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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801-538-5340

March 15, 1991

Mr. James W. Dryden
Area Manager
Bureau of Land Management
San Rafael Resource Area
900 North 700 East
Price, Utah 84501

Dear Mr. Dryden:

Re: Tentative Approval of San Rafael Gypsum Quarry, Georgia Pacific Corporation, M/015/050, Emery County, Utah

This letter is to inform you that the Division has completed its review of Georgia Pacific Corporation's permit application for the San Rafael Quarry Project (South Salt Wash Gypsum Mine). We apologize for the delay in forwarding our comments on to your office. The Division is prepared to grant a conditional tentative approval of the application. However, we ask that Georgia Pacific satisfy the following technical concerns within 30 days of their receipt of this letter:

R613-004-105. Maps, Drawings and Photographs

1. The submitted surface facilities map is of an adequate scale (1" = 200'), however, it does not show the proposed drainage control structures mentioned in the plan. The operator has indicated that a total area of approximately 33 acres will be disturbed over the life of the mine. According to the measurements taken from the map, the total disturbed area for the life of the mine is approximately 13 acres. These two figures do not agree and will need to be clarified. Perhaps the map has been reduced from the original size or the scale shown is not correct.

2. The Division cannot readily distinguish, from the map legend given on Exhibits A & B, the difference between "Affected Property Owned By Others" and "Areas To Be Affected By Exploration". For these maps to be clearly legible, the legend/key with pertinent areas depicted on the Exhibits, should be color-coded to be easily understood. The "Existing

Roads" section of the legend should also be color-coded to eliminate any confusion with the proposed exploration roads.

3. The plan does not provide an adequate description of the proposed erosion control structures with respect to design and location.

R613-004-106. Operation Plan

1. The plan does not include information regarding the depth to groundwater, nor an adequate description of the annual volume of waste/overburden materials to be mined.

2. The plan does not mention whether any topsoil material has been salvaged from the turnaround and quarried areas already impacted. If topsoil has been salvaged, where has it been stockpiled? If not salvaged, what soil amending methodology will be used to reclaim these areas?

3. Where will the on-site topsoil stockpile(s) be located? This information should be indicated on the surface facilities map. Given the high erosion potential for the soils in this area, how will the soil stockpiles be protected?

R613-004-107. Operation Practices

1. The plan mentions the placement of safety berms above the highwalls, but no description of these berms is provided. Design drawings and/or a verbal description of these berms should be provided.

2. The plan calls for most of the pit highwalls to be regraded to a 3:1 slope upon reclamation. The operator should identify which highwalls will not be regraded to 3:1 and provide justification for leaving these areas steeper than 3:1. It is unclear what the configuration of these highwalls will be before this regrading (i.e. 40 feet high with no bench, or 20 feet high with a bench x-feet wide and another 20 feet down). This configuration will have an effect on the Division's estimate for reclaiming the highwalls and should be provided.

3. The plan infers that the ephemeral drainage channel immediately adjacent (west) of the present quarry area may eventually be mined through. The Division requests that specific mine development details be prepared by the operator and approved by the regulatory authorities prior to mining into/through this drainage. Design details will be required describing how the quarry will be expanded through the channel, how the normal drainage will be rerouted, and how the channel will ultimately be reclaimed.

R613-004-111. Reclamation Practices

1. Reclamation is proposed to be carried on concurrently as the mining operation progresses. The reclamation plan includes four basic steps: 1) clean-up and removal; 2) backfill, grade and contour; 3) soil redistribution and stabilization; and 4) revegetation. In addition to these steps, the pit floor(s) and roads will need to be ripped to a depth of at least 12 inches prior to the soil redistribution. The erosion control structures will also need to be reclaimed if they are constructed. In general, the reclamation plan should include a more detailed description of the reclamation activities. For example, "Backfilling the pit highwalls, then regrading to 3:1 slopes and performing final gradework to blend in with the surrounding contours."

2. The operator has provided limited information regarding the total projected volume of topsoil materials to be salvaged. This information will affect the reclamation cost estimate as well as the revegetation success at the site and should be provided.

R613-004-113. Surety

1. A surety estimate is enclosed with this letter. The operator has provided a reclamation cost estimate of $450/acre to perform the four basic reclamation steps outlined above. This does not include the cost of ripping the pit floor(s) and roads, or reclaiming any erosion control structures. It is the Division's opinion that this figure is too low. Our calculations established a cost of $5,728/acre or $80,200/14 acres.

We are willing to negotiate a more equitable amount, if the operator is not in agreement with the figure we have developed and the assumptions made. Georgia Pacific has not given an average overburden figure or a range of overburden thickness in the mine plan. Replacement of overburden has added a considerable amount to the total reclamation costs (@$35,000). The operator may want to re-evaluate this component of their mine plan.

An adequate reclamation cost estimate cannot be calculated by the Division until the operator provides the information requested. Namely, a response to the accuracy of the map scale, estimated amounts of overburden and topsoil materials to be salvaged for use in reclamation, and a description of the highwall configuration prior to final reclamation.

As required by state law, the Division will now proceed with issuance of a 30-day public notice concerning our tentative approval of this permit application. After the 30-day public comment period has expired, and the Board of Oil, Gas and Mining has approved of the operator's form and amount of reclamation surety, a final Division approval will be forwarded to the operator through your office. However, the form and amount of surety will not be approved by the Board until all the conditions have been met by Georgia Pacific. Please contact me, or Mr. Wayne Hedberg, Permit Supervisor, should you have questions or concerns regarding the content of this letter. Thank you for your continued cooperation and assistance in completing this permitting action.

Sincerely,

Lowell P. Braxton
Associate Director, Mining

jb
Enclosure
cc: Bob Shajary, Georgia Pacific
Minerals staff
M015050.2

RECLAMATION ESTIMATE

Georgia Pacific
San Rafael Quarry Emery County
M/015/030 February 4, 1991
Prepared by Utah State Division of Oil, Gas & Mining

Reclamation Details

-All areas & lengths were measured on the submitted map (1"= 200')
-Highwall to be reduced to 3:1 slope using a Cat D8N dozer
-Highwall is 1,180 ft long; ASSUMED: 30 ft high and vertical
-Ripping: pit floor @ 12 acres, storage area and turn around @ 1.7 acres
-Ripping to a 12 inch depth using a Cat D8N dozer
-Areas to be ripped prior to soil material placement
-ASSUMED: cryptogamic = 2 inches, topsoil = 1 ft, overburden = 2 ft
-Cryptogamic soil, overburden material & topsoil replaced on pit area
-Area of soil material salvage is approximately 12 acres
-Estimated: crypto = 3,291 CY, overburden = 38,720 CY, topsoil = 19,360 CY
-Entire disturbed area (14 acres) to be drill seeded
-**This estimate is based on the assumptions/figures stated above**

Description	Amount		$/Unit	Cost-$
Highwall Reduction	1,180	ft	3.00	3,540
Ripping Pit Floor	12.0	acre	480	5,760
Ripping Storage & Turnaround	1.7	acre	480	816
Replacing Cryptogamic Soil	3,291	CY	0.90	2,962
Replacing Overburden	38,720	CY	0.90	34,848
Replacing Topsoil	19,360	CY	0.90	17,424
Drill Seeding Entire Disturbed Area	14	acre	200	2,800
Mobilization	lump sum		2,000	2,000
			SUBTOTAL	70,150
			+ 10% CONTINGENCY	7,015
			SUBTOTAL	77,165
			+ 5 yr ESCALATION(1.84%)	3,017
			TOTAL	80,182

ROUNDED TOTAL IN 1996-$ $80,200